

Liberti Science

Name _____

Ecosystems paper

Block _____

Climate Change and Ecosystems

The State Department of Conservation has asked you and your class to research and evaluate how climate change may impact an ecosystem in New England. Our class will be divided into ecosystem research teams, each selecting a specific ecosystem. Due to the complex relationships between organisms, each of you will select a different organism and share your findings with your team. You will ultimately create a paper and presentation to present to your peers. Below are some questions that will help get you started. Be sure to answer them as best as you can. Be sure to cite evidence supporting your answers. You may use any credible resource, books, internet, text, class notes etc.

We will be using this packet for the next while, so it is Very important that you keep it safe. You will lose significant work if you lose this paper.

Part One

My team's ecosystem is _____

My organism is _____

My organism's place in the food web is (circle one) Producer Herbivore Carnivore Omnivore
Decomposer

Sketch a web of this organisms place in the ecosystem; show some of the things it may eat, and some that may eat your organism.

Part Two Directions: Climate and Abiotic factors can affect organisms in many ways. Some of these ways are very direct. For example, it may be too dry or too wet for your organism to survive. Others are less direct, for example, your organism may be able to live through a temperature change, but can its food sources survive? Think about this as you answer the following questions in complete sentences.

Reproduction

1. How is the organism affected by the seasons?

2. Does the organism reproduce sexually or asexually? (if asexually tell me how)

3. When and how often does it breed? Does it need a different habitat to breed in?

Food

4. What are foods of this organism? What does it like to eat the most?

5. What do the young eat?

6. Is food supply affected by the seasons?

Shelter

7. Where does the species live in the ecosystem, where is its niche?

8. Does the organism share this space?

9. Is different shelter needed for breeding and raising young?

Predators/disease

10. What if any other organisms depend on this species for food?

11. BONUS what diseases or pests affect this organism? What conditions make the organism susceptible to disease susceptible to disease?

Competition

12. What organisms compete with this species for food, shelter, or other needs?

13. BONUS what, if anything, maintains a balance among these competitors?

Part Three Directions: Now that you have learned more about your organism and all of its needs, it is time to predict how changes to the environment will affect your organism. Fill in the chart on the next page – remember your thoughts must be based on evidence from your research.

Type of Change	Impact: None, Little, Moderate, Significant	Type of impact (i.e. must live somewhere else, less food, less young, lower population)
Higher Temps/more heat waves		
Changes in drought frequency/severity		
Heavier Snowfalls		
Changes in flooding frequency/severity		
Sea Level Rise		
Changes in fire frequency/severity		

Part Four Directions: It is now time to put your research to use. You will need to write a paper describing your organism. You should include the background information you found in part two to explain to the reader what makes your organism unique. You should write a paragraph for each section in part two (reproduction, food, shelter, predators, disease and competition) you may order your paragraphs in whatever order you feel is best. Remember that you will also need an introduction and conclusion paragraph.

You will then begin the second part of your paper by selecting a specific change to the habitat from the chart in part three. In 2 or more paragraphs you need to explain what you believe will happen to your organism. Remember to use your ACES strategy (Answer, Cite evidence, Explain, Sum it up)

To help you complete this paper please complete these following steps in order.

1. Start out by selecting and filling in a pre writing graphic organizer from our cabinet.
2. Make sure you review your rubric and ask your teacher if you are unsure of any of the requirements.
3. Once you have completed the graphic begin your rough draft.
4. Your rough draft will be due for peer revision_____
5. Your teacher will be available_____

_____ to help you revise.
6. Your typed final draft will be due_____
7. You will be given class time to create a poster that will be presented to the class; we will talk more about this later.